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installing the biasing member and the spacer in the contact carrier.

2. (once amended) A method according to Claim 1 wherein said step of providing a spacer further comprises the step of:

determining a compressed biasing member length; and

A providing the spacer having a length substantial equal to said compressed biasing member length.

3. (once amended) A method according to Claim 1 wherein the contact carrier defines an access slot, said step of providing a spacer further comprises the step of:

determining a moving contact safe travel distance; and

providing the spacer sized to be received in the access slot, the spacer engaging the moving contact when the moving contact moves the safe travel distance.

Remarks

The Office Action mailed August 2, 2002 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-31 are now pending in this application. Claims 8-31 have been withdrawn from consideration. Claims 1-7 stand rejected.

The objection to the specification is respectfully traversed. The title of the invention has been amended to recite "METHOD FOR LIMITING MOVEMENT IN ELECTRICAL CONTACTORS."

For the reasons set forth above, Applicants request that the objection to the title of the specification be withdrawn.

The rejection of Claims 2-3 under 35 U.S.C. § 112 is respectfully traversed.

Claims 2 and 4 have each been amended to recite “the spacer”.

For the reasons set forth above, Applicants respectfully request that the Section 112 rejections of Claims 2-3 be withdrawn.

The rejection of Claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by Hirata (U.S. Patent No. 4,063,054) is respectfully traversed.

Hirata describes a key switch equipped with a contact piece. The contact piece is pressed down by a key top (13) actuated by an external force (such as a finger) thereby closing an electric circuit. A key top (13) is included with a downwardly extending protruding part (14) on the bottom thereof, and engages an elastic element, for example a coil spring (15), that surrounds protruding part (14). The remainder of key top (13) is coupled to a central portion (17) of a first plate spring member (16). A peripheral portion (19) of member (16) is placed on an insulating spacer (20).

When key top (13) is depressed, protruding portion (14) enters an opening formed in central portion (17) and depresses a central portion (23) of a second plate spring member (22). Spacer (20) limits an amount of travel of spring member (16).

Claim 1 recites a method for restricting travel of a moving contact in a lighting contactor, wherein the method comprises the steps of “providing a spacer...providing a biasing member...positioning the biasing member through the spacer...”.

Hirata neither describes nor suggests a method for restricting travel of a moving contact in a lighting contactor by providing a spacer, a biasing member and positioning the biasing member through the spacer.

Specifically, Hirata shows in Figs. 4a-4d that the coiled spring 15 surrounds the protruding portion 14 and does not extend through the protruding portion 14. In addition, Hirata states in col. 2, lines 56-63, "Said bottom of key top 13 engages with an elastic element, for example a coil spring 15, which is provided to surround said protruding portion 14 and of which the other extremity is placed on the central portion 17 of a first plate spring member 16 of a conductive material and of a form shown in FIG. 3(a) with the central portion thereof protruding upwards."


For the reasons set forth above, Claim 1 is submitted to be patentable over Hirata.

Claims 2-7 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-7 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-7 likewise are patentable over Hirata.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-7 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: McGill et al.

Serial No.: 09/681,963

Filed: June 29, 2001

For: METHOD AND APPARATUS
FOR LIMITING MOVEMENT IN
ELECTRICAL CONTACTORS

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: Art Unit: 3729
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: Examiner: Kim, Paul
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SUBMISSION OF MARKED UP CLAIMS AND PARAGRAPHS

Hon. Assistant Commissioner for Patents
Washington, D.C. 20231

In response to the Office Action dated August 2, 2002, please amend the above-identified patent application as follows:

IN THE SPECIFICATION

Please delete the title of the invention and replace therefore:

METHOD FOR LIMITING MOVEMENT IN ELECTRICAL CONTACTORS

IN THE CLAIMS

1. (once amended) A method for restricting travel of a moving contact in a lighting contactor, the lighting contactor including the moving contact and a contact carrier, said method comprising the steps of:

providing a spacer;

providing a biasing member;

positioning the biasing member [though] through the spacer; and

installing the biasing member and the spacer in the contact carrier.

2. (once amended) A method according to Claim 1 wherein said step of providing a spacer further comprises the step of:

determining a compressed biasing member length; and

providing [a] the spacer having a length substantial equal to said compressed biasing member length.

3. (once amended) A method according to Claim 1 wherein the contact carrier defines an access slot, said step of providing a spacer further comprises the step of:

determining a moving contact safe travel distance; and

providing [a] the spacer sized to be received in the access slot, the spacer engaging the moving contact when the moving contact moves the safe travel distance.

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